ABSTRACT OF THE DISCLOSURE

For setting up a connection belonging to a particular traffic class which does not make bandwidth reservation, information indicative of a priority related to cell discard declared by a source unit is stored in either of nodes in an ATM network corresponding to an identifier of the connection, such that the node selectively performs discard processing on cells belonging to the particular traffic class, when congestion occurs on the connection, in conformity to a predetermined discard condition determined by a relationship between the status of the congestion and the priority. In this way, traffics can be protected for connections having higher priorities even if they do not make bandwidth reservation.